PICK YOUR ACTIVITY

- ○ Option A: Impression Fossil (clay + object)
- ○ Option B: Mold and Cast Fossil (clay + object + plaster of Paris)

INVESTIGATION QUESTION

How does the process of making an impression or cast fossil model the way real fossils form in nature,

and what does the Cambrian Explosion have to do with why we have fossils at all?

HYPOTHESIS

Hint: try writing it as "If _____, then _____, because _____."

OBJECT SELECTION

What object did you choose to press? _____

Suggested objects: a shell, a leaf, a small bone, a pinecone scale, a textured rock

Why did you choose it? Consider texture, hardness, and how clearly it might leave an impression.

_____

Would this object fossilize well in real life? Before the Cambrian Explosion, organisms had no hard

parts. How does your object connect to what changed during the Cambrian?

_____

_____

OBSERVATION TABLE

Step	What You Did	What You Observed
Pressing the object into clay		
Removing the object		
Option B: Pouring the plaster		
Option B: Removing the cast		

ANALYSIS

The clay in this activity represents _____. The object represents _____. The plaster (if used) represents _____. What details were captured well in your impression? What was lost? How does this connect to why trilobite fossils tell us more than jellyfish fossils?

CONCLUSION

How does this activity model the real process of fossilization? What are the limits of this model? What does it not show that real fossilization involves?

CONNECT IT

The Burgess Shale preserved soft-bodied Cambrian creatures in extraordinary detail. Based on what you now know about how fossils form, why would soft-body preservation be so unusual and so scientifically valuable? What would we not know about the Cambrian Explosion without it?

THINK FURTHER

If you pressed a jellyfish into clay instead of a shell, what do you think would happen? What does that tell you about the gaps in the fossil record? What might the Cambrian ocean have looked like that we will never be able to know?

ADDITIONAL NOTES